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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/694,701

10/23/2000

Jang B. Rampal

1956-045

9837

22471

7590

10/22/2002

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EXAMINER

TUNG, JOYCE

ART UNIT

PAPER NUMBER

1637

DATE MAILED: 10/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory ActionApplication No.
09/694,701Applicant(s)
Rampal et al.Examiner
Joyce TungArt Unit
1637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED Sep 23, 2002 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

Therefore, further action by the applicant is required to avoid the abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

THE PERIOD FOR REPLY [check only a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
- (b) ☐ they raise the issue of new matter (see NOTE below);
- (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
- (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because:
Please the attached.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____

Claim(s) objected to: _____

Claim(s) rejected: claims 29-42, 55-66 and 68-70

Claim(s) withdrawn from consideration: _____

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
10. ☐ Other: _____

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1. The amendment filed 9/23/2002 has been entered.
2. The rejection of claim 55 under 35 U.S.C. §112, first paragraph is withdrawn because of the argument.
3. The rejection of claim 56 under 35 U.S.C. §112, second paragraph is withdrawn because of the argument.
4. Claims 64-66 and 69 remain rejected under 35 U.S.C. §102(b) as being anticipated by Fareed et al. (4,970,144).

Applicants argue that the modified substrate is well defined in the specification, Fareed et al. do not teach providing a modified substrate as defined in the specification and Fareed et al. do not teach that the probe or target polypeptide directly is adsorbed and immobilized on the substrate surface with the modified surface by drying. Nevertheless, Fareed et al. teach that there are many solid phase immunoabsorbents can be employed and the immobilized antibodies may be covalently or physically bound to the solid phase by techniques such as covalent bonding via an amide or ester linkage. The teachings of Fareed et al. anticipate that if the binding is via covalent binding, the solid phase would have been modified to provide the covalent binding to the antibodies (See column 10, lines 19-29). Furthermore, the claim language "modified substrate" is unclear what kind of modification made on the surface of the substrate. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26USPQ2d 1057 (Fed. Cir. 1993). Since Fareed et al. taught air-drying of a protein solution on the bottom of wells in microtiter

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dishes, the teachings of Fareed et al. anticipate the limitations of claims 64-66 and 69. The rejection is maintained.

Applicants further argue that it is an unexpected discovery of the present invention. If it is an unexpected discover of the present invention that modified substrates, such as plasma-aminated polypropylene and polysterence substrates are capable of direct and stable adsorption of polypeptides without the need for additional fix steps, the limitations from the specification are suggested to be read into the claims.

5. Claims 29-42 and 55-63 remain rejected under 35 U.S.C. §103(a) as being unpatentable over Head et al. (6,322,968) in view of Groet et al. (4,588,682).

Applicants argue that Groet et al. do not disclose direct adsorption of the probe or target biopolymer on the substrate surface, Groet et al. disclose a method of binding nucleic acid to a support by depositing the nucleic acid on the support then contacting the nucleic acid and the support with a liquid-binding solution which contains an organic solvent capable of binding the nucleic acid to the support (See column 1, lines 25-32). However, alternatively, Groet et al. do disclose the affixation of nucleic acid is carried out by air drying followed by drying the a vacuum oven (See column 1, lines 19-20). Furthermore, the claim language does not describe how "air drying" and "directly adsorbs" are occurred. As indicated in section 4 above, although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26USPQ2d 1057 (Fed. Cir. 1993). Thus, the rejection is maintained.

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6. Claims 69-70 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Fareed et al. (4,970,144).

Claims 69-70 depend from claim 64 in which the rejection of claim 64 is maintained as discussed in section 4 above

The teachings of Fareed et al. are set forth in section 8 of the Office action mailed 6/19/2002. Fareed et al. do not disclose that the amount of target nucleic acid is applied and the time for air dry as claimed.

However, it would have been prima facie obvious to modify the reaction condition of Fareed et al. by adjusting an amount of the target biopolymer used and the time for air drying the target biopolymer on the surface of substrate as claimed with a reasonable expectation of success because it was routine practice in the art at the time of the instant invention since the amount of polynucleotide used as claimed is in a common range and the time needed for drying the sample is also in a common range.

7. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Joyce Tung whose telephone number is (703) 305-7112. The examiner can normally be reached on Monday-Friday from 8:00 AM-4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached at (703) 308-1119 on Monday-Friday from 10:00 AM-6:00 PM.


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Any inquiries of a general nature or relating to the status of this application should be directed to the Chemical/Matrix receptionist whose telephone number is (703) 308-0196.

8. Papers related to this application may be submitted to Group 1600 by facsimile transmission. Papers should be faxed to Art Unit 1637 via the PTO Fax Center located in Crystal Mall 1 using (703) 305-3014 or 308-4242. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989).

Joyce Tung

October 8, 2002


GARY BENZION, PH.D.
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600